

CLAIMS

What is claimed is:

1. A window framing system, comprising:
a plurality of pieces that are structural components of a primary frame,
the pieces being preformed and to be assembled so as to build the frame at a
job site, wherein the pieces include a sub-frame and a base,
the sub-frame having a corner to receive a glazing unit,
the base to be assembled with the sub-frame so as to secure the glazing
unit in the corner.
2. The system of claim 1 wherein the pieces further include a sub-frame, a
first base and a second base of a mullion,
the mullion sub-frame having respective corners to receive first and
second glazing units, respectively,
the first and second bases to be assembled with the mullion sub-frame
so as to secure the first and second glazing units in the respective corners.
3. The system of claim 2 wherein the mullion is to be horizontally oriented
as assembled.
4. The system of claim 2 wherein the mullion is to be vertically oriented as
assembled.
5. The system of claim 2 wherein the first and second mullion bases are
shorter, in height, than said base.
6. The system of claim 1 wherein the sub-frame has an elongated portion
with an L-shaped cross-section that defines said corner and has a first segment
to be secured to one of a head, jamb, and sill at the job site, and a second
segment with a cavity therein that runs lengthwise through a substantial part
of the elongated portion.
7. The system of claim 6 wherein the sub-frame has a plurality of screw
holes formed lengthwise in the first segment.

8. The system of claim 6 wherein the base has an elongated portion with an L-shaped cross-section whose first segment lies against the glazing in said corner and whose second segment is to be secured to the sub-frame.
9. The system of claim 8 further comprising an aesthetic cap that is to be coupled to the base so as to substantially hide the first and second segments of the base and from view.
10. The system of claim 8 further comprising an aesthetic cap that is to be coupled to the sub-frame so as to substantially hide from view the base and the sub-frame.
11. The system of claim 1 wherein each of the sub-frame and the base is essentially made of a continuous piece of extruded aluminum.
12. The system of claim 6 wherein the first segment of the sub-frame is of extruded aluminum with a thermal break formed therein.
13. The system of claim 2 wherein the mullion sub-frame has an elongated portion that has a substantially T-shaped cross-section in which the respective corners are on opposite sides of a stem.
14. The system of claim 13 wherein the stem has a cavity that runs lengthwise along a substantial part of the elongated portion,
the system further comprising a reinforcing strip sized to be inserted into the stem cavity.
15. The system of claim 13 wherein the stem has (i) a cavity therein that runs lengthwise along a substantial part of the elongated portion, and (ii) a pair of slots formed in its outside surface,
the system further comprising a notched reinforcing strip,
wherein the pair of slots are positioned relative to the cavity and are sized relative to the strip so that the strip can be passed through the pair of slots and a notched portion of the strip can be locked into position in the cavity between the pair of slots.
16. The system of claim 13 wherein the mullion sub-frame has a cavity that runs lengthwise through a part of the T-shaped cross-section.

17. The system of claim 16 wherein the sub-frame has a pair of slots on opposite ends of the hat,
the system further comprising:
a block sized to be inserted into the cavity through the pair of slots and being long enough to extend beyond both said ends of the hat when inserted;
and
an intermediate mullion piece that is sized to receive a portion of the block therein.
18. A window framing system, comprising:
a shear block; and
a plurality of pieces cut from extruded metal beams to form a frame, wherein the pieces include a perimeter sub-frame and a base,
the perimeter sub-frame having an elongated portion with a substantially L-shaped cross-section whose (i) inside corner is to receive a glazing unit, (ii) first segment is to be secured to one of a head, jamb, and sill , and (iii) second segment has a cavity that runs lengthwise through a substantial part of the elongated portion, the sub-frame having a slot positioned relative to the cavity and sized so that one end of the shear block can be inserted through the slot and into the cavity, and
the base to be assembled with the sub-frame to secure the glazing unit in the corner.
19. The system of claim 18 wherein the pieces are extruded aluminum pieces.
20. The system of claim 18 further comprising a mullion sub-frame having a cavity in which another end of the shear block is sleeved.
21. A method for framing a security glazing, comprising:
securing using fasteners a plurality of separate, perimeter sub-frame pieces to each other to form a primary frame sub-assembly;
positioning the sub-assembly next to building material in a window or door opening;;
positioning a security glazing unit in the sub-frame assembly; and

securing the glazing unit in place by fastening a plurality of base pieces to the building material.

22. The method of claim 21 further comprising:

cutting some of the sub-frame pieces from a beam of extruded aluminum at a job site where the glazing unit is positioned in the sub-frame assembly; and

cutting some of the base pieces from another beam of extruded aluminum at the job site.

23. The method of claim 21 wherein the sub-frame and frame pieces are secured to each other and to the building material to form a primary frame, without welding together any of the pieces.

24. The method of claim 23 wherein the glazing unit is positioned from a safe side of the primary frame.

25. The method of claim 21 wherein the fasteners used for securing the plurality of sub-frame pieces to each other are part of a screw spline system used to secure the sub-frame pieces to each other and to the building material.

26. The method of claim 21 wherein the primary sub-frame assembly is formed prior to being shipped to a job site.

27. The method of claim 26 further comprising applying an adhesive tape or liquid to the primary sub-frame assembly prior to positioning the glazing unit, so that the glazing unit is adhered to the primary sub-frame assembly prior to being shipped to the job site.

28. The method of claim 27 further comprising applying a plurality of fasteners to secure the plurality of base pieces to the primary sub-frame assembly, prior to shipping to the job site,

wherein the plurality of base pieces are secured to the building material at the job site using a further plurality of fasteners.